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Atty Docket No.: 59182/P012US/10021641

Reference:

Inventor: Harry C. Blackmon et al.

Application No.: 09/703,027-Conf. #9051

Filing Date: October 31, 2000

Title: ROUTER NETWORK PROTECTION USING MULTIPLE FACILITY
INTERFACES

Documents Filed:

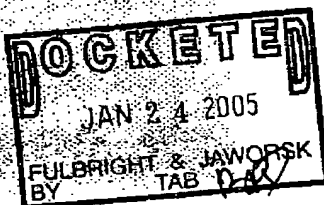
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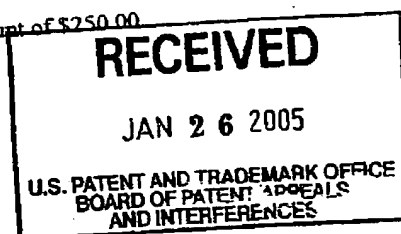
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Docket No.: 59182/P012US/10021641
(PATENT)**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**In re Patent Application of:
Harry C. Blackmon et al.

Application No.: 09/703,027

Filed: October 31, 2000

For: ROUTER NETWORK PROTECTION USING
MULTIPLE FACILITY INTERFACES

Confirmation No.: 9051

Art Unit: 2661

Examiner: A. T. Ton

APPEAL BRIEFMS Appeal Brief - Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

As required under § 41.37(a), this brief is filed within two months of the Notice of Appeal filed in this case on November 24, 2004, and is in furtherance of said Notice of Appeal.

The fees required under § 41.20(b)(2), and any required petition for extension of time for filing this brief and fees therefore, are dealt with in the accompanying TRANSMITTAL OF APPEAL BRIEF.

This brief contains items under the following headings as required by 37 C.F.R. § 41.37 and M.P.E.P. § 1206:

- | | |
|-------|---|
| I. | Real Party In Interest |
| II. | Related Appeals and Interferences |
| III. | Status of Claims |
| IV. | Status of Amendments |
| V. | Summary of Claimed Subject Matter |
| VI. | Grounds of Rejection to be Reviewed on Appeal |
| VII. | Argument |
| VIII. | Claims |

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IX. Evidence
X. Related Proceedings
Appendix A Claims

I. REAL PARTY IN INTEREST

The real party in interest for this appeal is:

Chiaro Networks Ltd.

II. RELATED APPEALS, INTERFERENCES, AND JUDICIAL PROCEEDINGS

There are no other appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in this appeal.

III. STATUS OF CLAIMS

A. Total Number of Claims in Application

There are 35 claims pending in application.

B. Current Status of Claims

1. Claims canceled: None
2. Claims withdrawn from consideration but not canceled: None
3. Claims pending: 1-35
4. Claims allowed: None
5. Claims rejected: 1-35

C. Claims On Appeal

The claims on appeal are claims 1-35.

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IV. STATUS OF AMENDMENTS

It is believed that all amendments have been properly entered. The last amendments to the claims were presented and entered from a response to non-final action filed April 12, 2004. Appellants filed a response after final rejection on August 24, 2004, wherein no amendments to the claims were made.

However, in the Advisory Action, the Examiner indicates that the amendments will not be entered and that such amendments are not supported by the specification. See Advisory Action at 1-2. Appellant asserts that the amendments in question were entered after the response to non-final office action and that the Examiner may not, at this late time, refuse to enter the previously-entered amendments. It is asserted that the amendments complied with the requirements 37 C.F.R. § 1.121 and did not fall under 37 C.F.R. § 1.116. Thus, such non-entry is improper. Accordingly, Appellant submits that the claims as presented in the Response to Final Office Action are correctly considered in this appeal.

V. SUMMARY OF CLAIMED SUBJECT MATTER

According to claim 1, a router system (10, Figures 1A-1C) configured for distributing information packets from multiple sources to multiple destinations within a network comprises:

a plurality of input and output facility interface circuit cards (11 and 12, Figures 1A and 1C), a plurality of line cards (13 and 18, Figures 1A and 1C) different from said facility interface circuit cards, said line cards being configured to perform packet forwarding functions (page 16, line 18 through page 17, line 14), and wherein each of said facility interface circuit cards is connected to one and only one said line card (See Figures 2 and 4, "TO/FROM PACKET FORWARDING MODULE").

According to claim 5, a communication network comprises a first router system (10, Figures 1A-1C), said first router system comprises:

a plurality of input and output interface ports, each of said input and output interface ports comprising two paired duplicate interface circuit cards (e.g., 11-OW and 11-OP, Figure 1A), a line card (13 and 18, Figures 1A and 1C) different from said interface circuit card, said

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line card being configured to perform packet forwarding functions (page 16, line 18 through page 17, line 14), and wherein said paired duplicate interface circuit cards are each connected in parallel with one and only one said line card (page 9, lines 19-20), such that one and only one said line card is connected to each of said paired duplicate interface circuit cards (See Figures 2 and 4, "TO/FROM PACKET FORWARDING MODULE").

According to claim 23, a method of distributing data streams within a communication system containing a plurality of router systems, said method comprises:

receiving duplicate data streams at two paired duplicate interface circuit cards of a first router system (page 5, lines 3-5 and page 9, lines 4-18), delivering said duplicate data streams from said two paired duplicate interface circuit cards to one and only one line card separate from said two paired duplicate interface circuit cards (page 9, lines 19-20), examining said duplicate data streams in accordance with predetermined selection criteria (page 9, line 20 through page 10, line 5), and if one said duplicate data stream satisfies said criteria and the second said duplicate data stream does not satisfy said criteria, then selecting said duplicate data stream that satisfies said criteria and discarding said duplicate data stream that does not satisfy said criteria (page 9, line 20 through page 10, line 5), and if both of said duplicate data streams satisfy said criteria, then arbitrarily selecting one of said duplicate data streams and arbitrarily discarding the non-selected duplicate data stream (page 19, lines 7-10).

VI. GROUNDS OF OBJECTION TO BE REVIEWED ON APPEAL

The grounds of rejection to be reviewed are:

A. First Ground of Rejection

Claims 1-10, 23, 24, 26-29, 34 and 35 are rejected under 35 U.S.C. § 103(a) as being unpatentable over *Oren et al*;

B. Second Ground of Rejection

Claims 11-22, 32, and 33 are rejected under 35 U.S.C. § 103(a) as being unpatentable over *Oren* in view of *Ramaswami et al*;

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C. Third Ground of Rejection

Claims 25, 30, and 31 are rejected under 35 U.S.C. § 103(a) as being unpatentable over *Oren* in view of *Bromley et al*; and

D. Fourth Ground of Rejection

The Examiner asserts that the phrase, "one and only one," which appears in various claims, is unsupported by the specification.

It should be noted that on page 14 of the Final Office Action, the Examiner states, "Appellant's arguments with respect to claims 1-35 have been considered but are moot in view of the new grounds of rejection." Appellant understands this to mean that all rejections from the first Office Action that were not repeated in the Final Office Action are replaced by the new grounds of rejection. Accordingly, Appellant presents the above-recited grounds of rejection for review, which Appellant believes are the only grounds still asserted.

VII. ARGUMENT

A. First Ground of Rejection

Claims 1-10, 23, 24, 26-29, 34, and 35 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over *Oren et al.* (U.S. Patent No. 5,844,887, hereinafter *Oren*). To establish a prima facie case of obviousness under 35 U.S.C. § 103(a), three basic criteria must be met. First, there must be some suggestion or motivation, either in the reference itself or in the knowledge generally available to one of ordinary skill in the art, to modify the applied reference. See *In re Vaeck* 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). Second, there must be a reasonable expectation of success. *In re Merck and Co., Inc.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). Finally, the applied reference must teach or suggest all the claim limitations. *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). Without conceding the second criterion, Appellant asserts that the Examiner's rejection of these claims does not satisfy the first and third criteria.

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1. Improper Motivation

The Examiner concedes that *Oren* does not expressly teach "wherein each facility interface circuit cards is connected to one and only one said line card." Final Office Action at 2. However, the Examiner asserts that "[a]t the time of the invention, it would be obvious to a person of ordinary skill in the art to combine such an each of said facility interface circuit cards is connected to one and only one said line card teaching in the instant claim with *Oren*." Final Office Action, at 3. Furthermore, the Examiner asserts that the motivation for doing so would have been "to provide a [sic] faster processing in a packet/cell delivery network." *Id.*

That references can be combined or modified is not sufficient to establish a prima facie case of obviousness. See *In re Mills*, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990). It is well settled that the prior art must suggest the desirability of the claimed invention. See *In re Linter*, 458 F.2d 1013, 1016, 173 USPQ 560, 562 (CCPA 1972). *Oren* does not detail such desirability. Rather, the motivation supplied by the Examiner is derived from the Appellant's disclosure. See Final Office Action at 3 (stating "it would have been obvious to combine the instant claim and *Oren* the invention as specified in this claim 1). The teaching or suggestion to make the claimed combination must be found in the prior art, not in Appellants' disclosure. *In re Vaeck*, 20 U.S.P.Q.2d 1438 (Fed. Cir. 1991). Thus, the motivation to combine provided by the Examiner is improper, as the motivation must be described in a prior art reference and must detail the benefits of such a modification.

In this case, the Examiner has impermissibly used knowledge from the Appellant's own invention to modify a prior art reference. Also, Appellant respectfully asserts that combining gleaned knowledge from the Appellant's disclosure with the prior art *Oren* reference constitutes impermissible hindsight. See *In re McLaughlin*, 170 U.S.C. 209, 212 (CCPA 1971).

Moreover, in establishing obviousness under 35 U.S.C. § 103(a), the proposed modification to the prior art cannot render the prior art unsatisfactory for its intended purpose. *In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984). *Oren* teaches that its multiple connections provide redundancy, which is essential to its invention. See *Oren* at Col. 3, lines 5-7. Modifying *Oren* in the manner suggested by the Examiner would reduce or eliminate such redundancy. See Fig. 17 description at Col. 19, line 56 of *Oren*. Accordingly,

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the modification suggested by the Examiner would render the *Oren* system unfit for its intended purpose. The rejection of claims 1-10, 23, 24, 26-29, 34, and 35 under 35 U.S.C. § 103(a) as unpatentable over *Oren* is respectfully traversed for the above reasons, and Appellant asserts that the rejection is improper and should be reversed.

2. Not All Limitations

Claim 1

The Examiner has stated that claims 1-10, 23, 24, 26-29, 34, and 35 are unpatentable over *Oren*. However, regarding claim 1, the Examiner admits that *Oren* "failed to explicitly disclose wherein each of said facility interface circuit cards is connected to one and only one said line card." Final Office Action at 2. To cure this deficiency, the Examiner asserts that the disclosures of Figure 5 of *Oren* illustrate such a limitation.

Appellant respectfully asserts that, on its face, Figure 5 of *Oren* shows a switching fabric with a plurality of port interface modules 50 each connected to multiple junction modules 52. Top input bus 90 and bottom input bus 94 each connect to multiple junction modules 52. The passage at Col. 11, lines 8-11 of *Oren* describes that "[s]witching fabric can also output a multicast cell, input on any physical port, to any combination of the 112 possible physical output ports supported by switching fabric 150." This aspect of *Oren* can only be accomplished according to Fig. 5 if multiple junction module connections are present for each input port interface module so that a cell can be routed to the correct output port. Because multiple junction module connections must be present for each input port interface module, *Oren* does not teach or suggest the limitation of each of said facility interface circuit cards is connected to one and only one said line card. Therefore, *Oren* does not teach or suggest all of the limitations of claim 1. Accordingly, the rejection of claim 1 under 35 U.S.C. § 103(a) is improper and should be reversed.

Dependent claims 2-4 depend from claim 1. As such, they inherit all of the limitations of the base claim. Because the *Oren* reference does not disclose all of the limitations of claim 1 the 35 U.S.C. § 103(a) rejections of record for claims 2-4 are not proper. Accordingly, Appellant respectfully asserts that the rejection of these claims is improper and should be reversed.

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Claim 5

The Examiner asserts that claim 5 is unpatentable over *Oren*. See Final Office Action at 4. Claim 5 contains the limitation "wherein paired duplicate interface circuit cards are each connected in parallel with one and only one said line card, such that one and only one said line card is connected to each of the paired duplicate interface circuit cards." *Oren* discloses in Figure 5 a switching fabric with a plurality of port interface modules 50 each connected to multiple junction modules 52. Top input bus 90 and bottom input bus 94 each connect to multiple junction modules 52. The passage at Col. 11, lines 8-11 of *Oren* describes that "[s]witching fabric can also output a multicast cell, input on any physical port, to any combination of the 112 possible physical output ports supported by switching fabric 150." This aspect of *Oren* can only be accomplished according to Fig. 5 if multiple junction module connections are present for each input port interface module so that a cell can be routed to the correct output port. Because multiple junction module connections must be present for each input port interface module, *Oren* does not teach or suggest the limitation of each of said facility interface circuit cards is connected to one and only one said line card. Therefore, *Oren* does not teach or suggest all of the limitations of claim 5. Because *Oren* does not teach or suggest all of the limitations of claim 5, a 35 U.S.C. § 103(a) rejection of this claim is not proper and should be reversed.

Dependent claims 6-10 depend from claim 5. As such, they inherit all of the limitations of the base claim. Because the *Oren* reference does not disclose all of the limitations of claim 5, the 35 U.S.C. § 103(a) rejections of record for claims 6-10 are not proper. Accordingly, Appellant respectfully asserts that the rejection of these claims is improper and should be reversed.

Claim 23

Appellant respectfully traverses the Examiner's assertion that the claimed subject matter of claim 23 is unpatentable over *Oren*. The Examiner admits that *Oren* does not explicitly disclose the claimed limitation of "if one said duplicate data stream satisfies said criteria and the second said duplicate data stream does not satisfy said criteria, then selecting said duplicate data stream that satisfies said criteria and discarding said duplicate data stream that does not satisfy said criteria." See Final Office Action at 7. *Oren* discloses procedures

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for operation in the event of a failure detected in a fabric card. The procedure to be followed in *Oren* in the event of failure is for an interface card attached to a defective card to transmit on terminals in a redundant row. See Col 20, lines 49-52 of *Oren*. The terminal switching between rows is performed by a multiplexer device programmed by the system manager or host. See Col. 20, lines 53-55 of *Oren*.

Appellant respectfully traverses the Examiner's assertion that this inherently discloses the limitation of claim 23 and implies that the claimed duplicate data stream does not meet the predetermined selection criteria because the failure occurs. The passage from *Oren* does not teach a duplicate data stream, but rather, teaches the same data stream over an alternative path. Thus, there is no duplicate data stream to discard, and such claimed feature is not inherent in *Oren*. It is clear that *Oren* does not discard a duplicate data stream that does not satisfy predetermined selection criteria as in the claimed subject matter. Therefore, because the *Oren* reference does not teach or suggest all limitations of claim 23, the 35 U.S.C. § 103(a) rejection of this claim is improper.

Dependent claims 24, 26-29, 34, and 35 depend from claim 23. As such, they inherit all of the limitations of the base claim. Because the *Oren* reference does not disclose all of the limitations of claim 23, the 35 U.S.C. § 103(a) rejections of record for claims 24, 26-29, 34, and 35 are not proper. Accordingly, Appellant respectfully asserts that the rejection of these claims is improper and should be reversed.

B. Second Ground of Rejection

Claims 11-22, 32 and 33 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over *Oren* in view of *Ramaswami et al.* (U.S. Patent No. 6,597,826). As these claims depend from claims 5 and 23, they inherit all of the limitations of the base claims. Because the *Oren* reference does not teach or suggest all of the limitations of claims 5 and 23, and *Ramaswami* is not relied upon as teaching or suggesting these limitations, the 35 U.S.C. § 103(a) rejections of record for claims 11-22, 32, and 33 was not proper. Accordingly, Appellant respectfully traverses the rejection of these claims.

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C. Third Ground of Rejection

Claims 25, 30, and 31 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over *Oren* in view of *Bromley* et al. (U.S. Patent No. 6,658,021). As these claims depend from claims 23, they inherit all of the limitations of the base claims. Because the *Oren* reference does not teach or suggest all of the limitations of claim 23, and *Ramaswami* is not relied upon as teaching or suggesting these limitations, the 35 U.S.C. § 103(a) rejections of record for claims 25, 30, and 31 was not proper. Accordingly, Appellant respectfully traverses the Examiner's rejection of these claims. Accordingly, Appellant respectfully asserts that the rejection of these claims is improper.

D. Fourth Ground of Rejection

The Examiner asserts that the phrase, "one and only one," which appears in various claims, (e.g., in claim 1, "wherein each of said facility interface circuit cards is connected to one and only one said line card") is unsupported by the specification. See Advisory Action at 2. Appellant traverses such remarks.

First, this remark, in its current form, is an improper rejection. Appellants respectfully note that the Examiner must comply with M.P.E.P. § 707.07(d), which directs that rejections must include the word, "reject" and must state the statutory basis therefor. Further, such rejection has not been seasonably made, in that the rejection has been asserted at this late time, and should have been made in an earlier office action.

Second, the above-recited feature is supported by the specification, as described below. Such a connection is shown in the drawings. See, for example, Figure 1A, which illustrates that the only line card that facility circuit cards 11-0 are connected to is line card 13-0. Thus, it is illustrated that such interface circuit card is connected to one and only one said line card.

The Examiner asserts that each interface circuit card in Figure 1A is connected to each line card via the other interface circuit cards. However, such an assertion is incorrect because the connections do not exist. The passage in the instant specification at page 10, line 19 through page 11, line 3 describes the daisy chain data bus (item 105 of Figure 1A). The passage recites, in part, "If for example packet forwarding module 13-1 were to fail, then

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input facility modules 11-1P and 11-1W send their traffic down data bus 105 linking facility modules 11-2 and 11-3 to facility module 11-4, which then switches those inputs to protect packet forwarding module 13-4." Thus, the passage describes that each interface circuit card is connected to the other interface circuit cards. If interface circuit card 11-0 needs to send its information through channel 4 (and line card 13-4), then it must send the information to interface circuit card 11-4, which switches that information to line card 13-4. In other words, in this example, use of the daisy chain bus requires switching by one other interface circuit card because each interface circuit card is only connected to one line card. To assert that, for example, interface circuit card 11-0 is connected to line card 13-4 through interface circuit card 11-4 not only stretches the meaning of "connected" unreasonably, but also ignores the switching function performed by interface card 11-4. Therefore, the phrase, "one and only one," as used in the claims, is clearly supported by the specification.

Further, the Examiner asserts that such feature does not distinguish the claims over the cited art. In response, Appellant points to the arguments above that traverse the 35 U.S.C. § 103(a) rejections of the claims.

VIII. CLAIMS

A copy of the claims involved in the present appeal is attached hereto as Appendix A. As indicated above, the claims in Appendix A do include the amendments filed by Appellant on April 12, 2004.

IX. EVIDENCE

No evidence pursuant to §§ 1.130, 1.131, or 1.132 or entered by or relied upon by the examiner is being submitted.

X. RELATED PROCEEDINGS

No related proceedings are referenced in II. above, or copies of decisions in related proceedings are not provided, hence no Appendix is included.

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Appellant believes a fee of \$250.00 is due with this response. However, if any additional fee is due, please charge our Deposit Account No. 06-2380, under Order No. 59182/P012US/10021641 from which the undersigned is authorized to draw.

Dated: January 24, 2005

Respectfully submitted,

By Thomas W. Kelton
Thomas Kelton
Registration No.: 54,214
FULBRIGHT & JAWORSKI L.L.P.
2200 Ross Avenue, Suite 2800
Dallas, Texas 75201-2784
(214) 855-7115
(214) 855-8200 (Fax)
Attorney for Appellant

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APPENDIX A**Claims Involved in the Appeal of Application Serial No. 09/703,027**

1. (Previously Presented) A router system configured for distributing information packets from multiple sources to multiple destinations within a network, said router system comprising:
 - a plurality of input and output facility interface circuit cards;
 - a plurality of line cards different from said facility interface circuit cards, said line cards being configured to perform packet forwarding functions; and
 - wherein each of said facility interface circuit cards is connected to one and only one said line card.
2. (Previously Presented) The router system of claim 1 wherein a redundant pair of said facility interface circuit cards is connected in parallel to each said line card, such that one and only one said line card is connected to each of said paired redundant interface circuit cards.
3. (Original) The router system of claim 2 wherein said paired redundant interface circuit cards are configured to operate in a one-for-one protection mode.
4. (Original) The router system of claim 1, further comprising a control processor located on said line card, wherein said control processor is configured to control functions of said line card and of said facility interface circuit card connected to said line card.

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5. (Previously Presented) A communication network comprising a first router system, said first router system comprising:

a plurality of input and output interface ports, each of said input and output interface ports comprising two paired duplicate interface circuit cards;

a line card different from said interface circuit card, said line card being configured to perform packet forwarding functions; and

wherein said paired duplicate interface circuit cards are each connected in parallel with one and only one said line card, such that one and only one said line card is connected to each of said paired duplicate interface circuit cards.

6. (Original) The communication network of claim 5 wherein said first router system is disposed in a folded configuration, such that each of said paired duplicate interface circuit cards contains duplex input and output interface ports.

7. (Original) The communication network of claim 5 wherein said first router system is disposed in a folded configuration, such that each of said line cards is configured to perform both input and output packet forwarding functions.

8. (Original) The communication network of claim 5 wherein said first router system comprises 320 input interface ports and 320 output interface ports.

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9. (Original) The communication network of claim 5 further comprising a second router system, said second router system comprising:

a plurality of input and output interface ports, each of said input and output interface ports comprising two paired duplicate interface circuit cards;

a line card different from said interface circuit card, said line card being configured to perform packet forwarding functions;

wherein said paired duplicate interface circuit cards are each connected in parallel with one said line card, such that one said line card is connected to each of said paired duplicate interface circuit cards; and

said second router system being interconnected with said first router system through duplicate data paths, such that each of said paired duplicate interface circuit cards of said first router system is interconnected to one of said paired duplicate interface circuit cards of said second router system through one of said duplicate data paths.

10. (Original) The communication network of claim 9 wherein each of said duplicate data paths is configured to carry duplex data between said first and said second router systems.

11. (Original) The communication network of claim 5 wherein said first router system further comprises an optical switch having an N by M crossbar configuration, said optical switch being located within the core of the router system and having a plurality of ingress ports and a plurality of egress ports, wherein N is the integer number of ingress ports and M is the integer number of egress ports of said optical switch.

12. (Original) The communication network of claim 11 wherein N is equal to M.

13. (Original) The communication network of claim 11 wherein N is not equal to M.

14. (Original) The communication network of claim 12 wherein N is greater than 10.

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15. (Original) The communication network of claim 14 wherein N is greater than 40.

16. (Original) The communication network of claim 15 wherein N is greater than 60.

17. (Original) The communication network of claim 13 wherein N and M are each greater than 10.

18. (Original) The communication network of claim 17 wherein N and M are each greater than 40.

19. (Original) The communication network of claim 18 wherein N and M are each greater than 60.

20. (Original) The communication network of claim 11 wherein said first router system further comprises a plurality of said optical switches.

21. (Original) The communication network of claim 9 wherein each of said duplicate data paths comprises an optical fiber.

22. (Original) The communication network of claim 21 wherein each of said duplicate data paths comprises duplex optical fibers.

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23. (Previously Presented) A method of distributing data streams within a communication system containing a plurality of router systems, said method comprising:
- receiving duplicate data streams at two paired duplicate interface circuit cards of a first router system;
 - delivering said duplicate data streams from said two paired duplicate interface circuit cards to one and only one line card separate from said two paired duplicate interface circuit cards;
 - examining said duplicate data streams in accordance with predetermined selection criteria; and
 - if one said duplicate data stream satisfies said criteria and the second said duplicate data stream does not satisfy said criteria, then selecting said duplicate data stream that satisfies said criteria and discarding said duplicate data stream that does not satisfy said criteria; and
 - if both of said duplicate data streams satisfy said criteria, then arbitrarily selecting one of said duplicate data streams and arbitrarily discarding the non-selected duplicate data stream.
24. (Original) The method of claim 23 wherein said duplicate data streams are received through redundant data paths from a second router system within said communication system.
25. (Original) The method of claim 23 wherein said predetermined selection criteria include criteria selected from the group consisting of a SONET standard, a packet-over-SONET protocol, and an ETHERNET protocol.
26. (Original) The method of claim 23 wherein said examining, said selecting, and said discarding are performed at said line card.
27. (Original) The method of claim 23, further comprising performing packet forwarding functions.

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28. (Original) The method of claim 27 wherein said packet forwarding functions are performed at said line card.

29. (Original) The method of claim 23 wherein said distribution of data streams is not interrupted by an occurrence selected from the group consisting of malfunction, failure, removal, and replacement of one of said two paired duplicate interface circuit cards.

30. (Original) The method of claim 23 wherein said received data streams comprise information packets encapsulated into frames.

31. (Original) The method of claim 30, further comprising extracting said information packets from said frames after receiving said data packets and before delivering said data packets to said line card.

32. (Original) The method of claim 24 wherein said redundant data paths comprise optical fibers.

33. (Original) The method of claim 32 wherein said redundant data paths comprise duplex optical fibers.

34. (Original) The method of claim 24 wherein routing addresses across said communication network are not changed by an occurrence within said first router system selected from the group consisting of malfunction, failure, removal, and replacement of one of said two paired duplicate interface circuit cards, such that data rerouting and route-flap are prevented in said second router system and are not broadcast in part or as a whole across said communication network.

35. (Original) The method of claim 24 wherein an occurrence of a failure within said data paths interconnecting said first router system with said second router system is detected and corrected independently by each of said first router system and said second router system, such that control communication between said first router system and said second router system is not required.



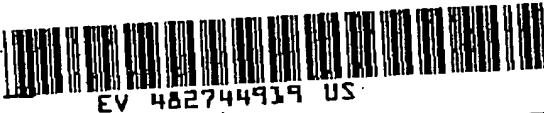
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